UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/687,450	10/13/2000	Namik Hrle	STL000048US1	1339

23373	7590	04/14/2006

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EXAMINER
WU, YICUN

ART UNIT	PAPER NUMBER
2165	

DATE MAILED: 04/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	Applicant(s)
Office Action Summary		09/687,450	HRLE ET AL.
		Examiner	Art Unit
		Yicun Wu	2165

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on <u>17 January 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-96* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,13,17,18,21,26,29-34,43,47,48,51,55,56,59-64,73,77,78,81,86 and 89-96* is/are rejected.

7)☒ Claim(s) *See Continuation Sheet* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Continuation of Disposition of Claims: Claims objected to are 5-12, 14-16, 19-20, 22-25, 27- 28, 35-42, 44-46, 49 -50, 52-54, 57-58, 65-72, 74-76, 79-80, 82-85 and 87-88 .

III. DETAILED ACTION

1. Claims 1-96 are presented for examination.

Examiner comments

2. This office action corrects application records. All previous presented rejections of the claims are hereby withdrawn as being moot. This office action replaces office action dated March 29, 2006 and corrects Applicants record to reflect that claims 91-96 were added in applicant's amendment dated 1/17/2006. See new office action below.

Response to Applicant' Remarks

3. Applicant argues:

(1) "the begin value and end value of Haderle do not teach or suggest the claimed target time and backup time.

Examiner disagree.

With respect to the 1st argument, the Examiner consider "backup time" is read on by "begin value" since the begin value has a time; and target time is read on by "end value" since the end value has a time. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In

re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir.

1993).

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate

paragraphs of 35 U.S.C. 102 that form the basis for the

rejections under this section made in this Office action:

> (b) the invention was patented or described in a printed publication in
> this or a foreign country or in public use or on sale in this country,
> more than one year prior to the date of application for patent in the
> United States.

5.   Claims 1-4, 13, 17-18, 21, 26, 29-34, 43, 47-48, 51,

55-56, 59-64, 73, 77-78, 81, 86 and 89-96 are rejected

under 35 U.S.C. 102(b) as being anticipated over Haderle et

al. (U. S. Patent No. 5,581,750).

      As to Claims 1, 31 and 61, Haderle et al. discloses a

method of recovering data in a database of a database

system stored in a datastore connected to a computer, the

method comprising:

scanning a database log, wherein the database log

records activities related to the database (col. 4, lines

17-27); and

identifying one or more individual objects to be

recovered to a target time with reference to a backup time

(col. 4, lines 17-27).

As to Claims 2, 32 and 62, Haderle et al. discloses a

method wherein the target time is user-defined (user-

defined is well known in the art).

As to Claims 3, 33, and 63, Haderle et al. discloses a

method wherein the backup time is user-defined (user-

defined is well known in the art).

As to Claims 4, 34 and 64, Haderle et al. discloses a

method further comprising analyzing the database log to

detect when a unit of recovery begins and when the unit of

recovery ends (col. 4, lines 17-27).

As to Claims 13, 43 and 73, Haderle et al. discloses a

method wherein a backup is taken (col. 4, lines 17-27).

As to Claims 17, 47 and 77, <u>Haderle et al.</u> discloses a method further comprising flushing cache data to disk (i.e. checkpoint. col. 4, lines 49-60).

As to Claims 18, 48 and 78, <u>Haderle et al.</u> discloses a method further comprising truncating the database log at the target time (i.e. checkpoint. col. 4, lines 49-60).

As to Claims 21, 51 and 81, <u>Haderle et al.</u> discloses a method further comprising restoring the identified objects (col. 4, lines 17-60).

As to Claims 26, 56 and 86, <u>Haderle et al.</u> discloses a method further comprising optimizing the identified objects by restoring a volume of the datastore and recovering corresponding objects (col. 4, lines 17-60).

As to Claims 29, 59 and 89, <u>Haderle et al.</u> discloses a method wherein the one or more individual objects to be recovered to a target time are recovered from a current time (col. 4, lines 17-60).

As to Claims 30, 60 and 90, <u>Haderle et al.</u> discloses a method wherein the current time represents at time at which the database system crashed (col. 4, lines 17-60).

As to Claims 91, 93 and 95, <u>Haderle et al.</u> discloses a method wherein the target time represents a time to which the database is restored (i.e. restored to a consistent state. col. 1, lines 62-63).

As to Claims 92, 94 and 96, <u>Haderle et al.</u> discloses a method wherein the backup time represents a time at which the database is created (col. 4, lines 17-60).

<u>Allowable subject Matter</u>

6.   Claims 5-12, 14-16, 19-20, 22-25, 27- 28, 35-42, 44-46, 49 -50, 52-54, 57-58, 65-72, 74-76, 79-80, 82-85 and 87-88 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7.   The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record Haderle et al. (U. S. Patent No. 5,581,750) does not disclose, teach or suggest the claimed limitations of (in combination with all other features in the claims):

an object is not recovered when the unit of recovery accessing that object ends before the target time and there are no pending writes for the object, as claimed in claim 5.

The prior art of record Haderle et al. (U. S. Patent No. 5,581,750) does not disclose, teach or suggest the claimed limitations of (in combination with all other features in the claims):

an object is recovered if the unit of recovery begins before the target time, and wherein the unit of recovery ends after the target time but before a current time, wherein the current time represents when object data is recorded to the database, as claimed in claim 9.

The prior art of record <u>Haderle et al.</u> (U. S. Patent

No. 5,581,750) does not disclose, teach or suggest the

claimed limitations of (<u>in combination with all other</u>

<u>features in the claims</u>):

an object is recovered if the unit of recovery begins

after the target time, and wherein the unit of recovery

ends before a current time, wherein the current time

represents when object data is recorded to the database, as

claimed in claim 12.

The prior art of record <u>Haderle et al.</u> (U. S. Patent

No. 5,581,750) does not disclose, teach or suggest the

claimed limitations of (<u>in combination with all other</u>

<u>features in the claims</u>):

the backup occurs prior to the target time and further

comprising restoring data without restoring the database

log , as claimed in claim 14.

The prior art of record <u>Haderle et al.</u> (U. S. Patent

No. 5,581,750) does not disclose, teach or suggest the

claimed limitations of (<u>in combination with all other</u>

<u>features in the claims</u>):

the backup occurs after the target time and further comprising restoring data and optionally restoring the database log, as claimed in claim 15.

The prior art of record <u>Haderle et al.</u> (U. S. Patent No. 5,581,750) does not disclose, teach or suggest the claimed limitations of (<u>in combination with all other features in the claims</u>):

restarting the database system with a conditional restart with defer all option, as claimed in claim 16.

The prior art of record <u>Haderle et al.</u> (U. S. Patent No. 5,581,750) does not disclose, teach or suggest the claimed limitations of (<u>in combination with all other features in the claims</u>):

disabling access to the database and restarting the database system, wherein restarting detects uncommitted units of recovery, as claimed in claim 19.

The prior art of record <u>Haderle et al.</u> (U. S. Patent No. 5,581,750) does not disclose, teach or suggest the claimed limitations of (<u>in combination with all other features in the claims</u>):

determining whether the database log should be applied to the restored objects to update the identified objects with current object data , as claimed in claim 22.

The prior art of record <u>Haderle et al.</u> (U. S. Patent No. 5,581,750) does not disclose, teach or suggest the claimed limitations of (<u>in combination with all other features in the claims</u>) :

optimizing the identified objects by grouping the identified objects, wherein the grouped objects have backups residing on the same volume of the datastore, as claimed in claim 27.

The prior art of record <u>Haderle et al.</u> (U. S. Patent No. 5,581,750) does not disclose, teach or suggest the claimed limitations of (<u>in combination with all other features in the claims</u>) :

an object is associated with different units of recovery, wherein one or more units of recovery require different levels of processing, and wherein the object is recovered utilizing the highest level of processing, as claimed in claim 28.

The prior art of record <u>Haderle et al.</u> (U. S. Patent

No. 5,581,750) does not disclose, teach or suggest the

claimed limitations of (<u>in combination with all other</u>

<u>features in the claims</u>):

an object is not recovered when the unit of recovery

accessing that object ends before the target time and there

are no pending writes for the object, as claimed in claim

35.

The prior art of record <u>Haderle et al.</u> (U. S. Patent

No. 5,581,750) does not disclose, teach or suggest the

claimed limitations of (<u>in combination with all other</u>

<u>features in the claims</u>):

an object is recovered if the unit of recovery begins

before the target time, and wherein the unit of recovery

ends after the target time but before a current time,

wherein the current time represents when object data is

recorded to the database, as claimed in claim 39.

The prior art of record <u>Haderle et al.</u> (U. S. Patent

No. 5,581,750) does not disclose, teach or suggest the

claimed limitations of   (in combination with all other

features in the claims):

an object is recovered if the unit of recovery begins

after the target time, and wherein the unit of recovery

ends before a current time, wherein the current time

represents when object data is recorded to the database, as

claimed in claim 42.

The prior art of record Haderle et al. (U. S. Patent

No. 5,581,750) does not disclose, teach or suggest the

claimed limitations of   (in combination with all other

features in the claims):

the backup occurs prior to the target time and further

comprising restoring data without restoring the database

log , as claimed in claim 44.

The prior art of record Haderle et al. (U. S. Patent

No. 5,581,750) does not disclose, teach or suggest the

claimed limitations of   (in combination with all other

features in the claims):

the backup occurs after the target time and further

comprising restoring data and optionally restoring the

database log, as claimed in claim 45.

The prior art of record <u>Haderle et al.</u> (U. S. Patent

No. 5,581,750) does not disclose, teach or suggest the

claimed limitations of (<u>in combination with all other</u>

<u>features in the claims</u>):

restarting the database system with a conditional

restart with defer all option, as claimed in claim 46.

The prior art of record <u>Haderle et al.</u> (U. S. Patent

No. 5,581,750) does not disclose, teach or suggest the

claimed limitations of (<u>in combination with all other</u>

<u>features in the claims</u>):

disabling access to the database and restarting the

database system, wherein restarting detects uncommitted

units of recovery, as claimed in claim 49.

The prior art of record <u>Haderle et al.</u> (U. S. Patent

No. 5,581,750) does not disclose, teach or suggest the

claimed limitations of (<u>in combination with all other</u>

<u>features in the claims</u>):

determining whether the database log should be applied

to the restored objects to update the identified objects

with current object data , as claimed in claim 52.

The prior art of record <u>Haderle et al.</u> (U. S. Patent

No. 5,581,750) does not disclose, teach or suggest the

claimed limitations of (<u>in combination with all other</u>

<u>features in the claims</u>):

optimizing the identified objects by grouping the

identified objects, wherein the grouped objects have

backups residing on the same volume of the datastore, as

claimed in claim 57.

The prior art of record <u>Haderle et al.</u> (U. S. Patent

No. 5,581,750) does not disclose, teach or suggest the

claimed limitations of (<u>in combination with all other</u>

<u>features in the claims</u>):

an object is associated with different units of

recovery, wherein one or more units of recovery require

different levels of processing, and wherein the object is

recovered utilizing the highest level of processing, as

claimed in claim 58.

The prior art of record <u>Haderle et al.</u> (U. S. Patent No. 5,581,750) does not disclose, teach or suggest the claimed limitations of (<u>in combination with all other features in the claims</u>):

an object is not recovered when the unit of recovery accessing that object ends before the target time and there are no pending writes for the object, as claimed in claim 65.

The prior art of record <u>Haderle et al.</u> (U. S. Patent No. 5,581,750) does not disclose, teach or suggest the claimed limitations of (<u>in combination with all other features in the claims</u>):

an object is recovered if the unit of recovery begins before the target time, and wherein the unit of recovery ends after the target time but before a current time, wherein the current time represents when object data is recorded to the database, as claimed in claim 69.

The prior art of record <u>Haderle et al.</u> (U. S. Patent No. 5,581,750) does not disclose, teach or suggest the claimed limitations of (<u>in combination with all other features in the claims</u>):

an object is recovered if the unit of recovery begins

after the target time, and wherein the unit of recovery

ends before a current time, wherein the current time

represents when object data is recorded to the database, as

claimed in claim 72.

The prior art of record Haderle et al. (U. S. Patent

No. 5,581,750) does not disclose, teach or suggest the

claimed limitations of (in combination with all other

features in the claims):

the backup occurs prior to the target time and further

comprising restoring data without restoring the database

log , as claimed in claim 74.

The prior art of record Haderle et al. (U. S. Patent

No. 5,581,750) does not disclose, teach or suggest the

claimed limitations of (in combination with all other

features in the claims):

the backup occurs after the target time and further

comprising restoring data and optionally restoring the

database log, as claimed in claim 75.

The prior art of record <u>Haderle et al.</u> (U. S. Patent No. 5,581,750) does not disclose, teach or suggest the claimed limitations of (<u>in combination with all other features in the claims</u>):

restarting the database system with a conditional restart with defer all option, as claimed in claim 76.

The prior art of record <u>Haderle et al.</u> (U. S. Patent No. 5,581,750) does not disclose, teach or suggest the claimed limitations of (<u>in combination with all other features in the claims</u>):

disabling access to the database and restarting the database system, wherein restarting detects uncommitted units of recovery, as claimed in claim 79.

The prior art of record <u>Haderle et al.</u> (U. S. Patent No. 5,581,750) does not disclose, teach or suggest the claimed limitations of (<u>in combination with all other features in the claims</u>):

determining whether the database log should be applied to the restored objects to update the identified objects with current object data , as claimed in claim 82.

The prior art of record <u>Haderle et al.</u> (U. S. Patent No. 5,581,750) does not disclose, teach or suggest the claimed limitations of (<u>in combination with all other features in the claims</u>):

optimizing the identified objects by grouping the identified objects, wherein the grouped objects have backups residing on the same volume of the datastore, as claimed in claim 87.

The prior art of record <u>Haderle et al.</u> (U. S. Patent No. 5,581,750) does not disclose, teach or suggest the claimed limitations of (<u>in combination with all other features in the claims</u>):

an object is associated with different units of recovery, wherein one or more units of recovery require different levels of processing, and wherein the object is recovered utilizing the highest level of processing, as claimed in claim 88.

Conclusion

8. **THIS ACTION IS MADE FINAL**, Applicant is reminded of

the extension of time policy as set forth in 37 CFR

1.136(a).

A shortened statutory- period for reply to this final

action is set to expire THREE MONTHS from the mailing date

of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the

advisory action is not mailed until after the end of the

THREE-MONTH shortened statutory period, then the shortened

statutory period will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR

1.136 (a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory

period for reply-expire later than SIX MONTHS from the

mailing date of this final action.
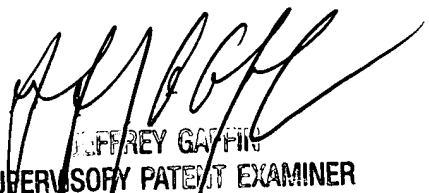
Points of contact

9.   Any inquiry concerning this communication or earlier
communications from the examiner should be directed to
Yicun Wu whose telephone number is 571-272-4087. The
examiner can normally be reached on 8:00 am to 4:30 pm,
Monday -Friday.

If attempts to reach the examiner by telephone are
unsuccessful, the examiner's supervisor, Jeffrey Gaffin can
be reached on 571-272-4146. The fax phone numbers for the
organization where this application or proceeding is
assigned are 571-273-8300.

Any inquiry of a general nature or relating to the
status of this application or proceeding should be directed
to the receptionist whose telephone number is 571-272-2100.

Yicun Wu
Patent Examiner
Technology Center 2100

April 11, 2006, 2006

JEFFREY GAFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100